



**PATIENT**

Penny Macari

**SPECIES**

Canine

**BREED**

Shih Tzu Mix

**SEX**

Spayed Female

**AGE**

10 years

**WEIGHT**

21.9 lbs

**INTERPRETED BY**

Eric Lindquist, DMV,  
DABVP, Cert. IVUSS,  
CEO of SonoPath.com

**IMAGING PERFORMED BY**

Kelly Vazquez, CVT

**HOSPITAL NAME**

Westwood Regional  
VH

**REFERRING VET**

Dr. Hartwick

**INVOICE**

96554

**DATE**

3/3/22

**PRESENTING CLINICAL SIGNS**

Patient presents for elevated liver enzymes, PU/PD, chronic arthritis. Had been discussing AUS and LDDST with previous AH - waited until financially able. Current meds: Denamarin, Dasuquin, Gabapentin, CurcuWin.

Abnormal PE/Chem/CBC/UA Results: 1/9/22: CBC: WNL, Chem 17: ALT 163, Alk. Phos. 696, TP 8.5, Alb. 4.3.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. No uroliths or sediment were visualized and anechoic urine was present. No evidence of inflammatory or neoplastic changes was noted. Ureteral papillae were normal.

The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for this age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. Slight pinpoint mineralization was noted. The right kidney measured 5.0 cm. The left kidney measured 4.42 cm.

**Adrenal Glands**

Both **adrenal glands** were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The left adrenal gland measured 1.91 x 0.53 cm at the caudal pole and 0.5 cm at the cranial pole. The right adrenal gland measured 1.76 x 0.5 cm at the caudal pole and 0.51 cm at the cranial pole.

**Spleen**

The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes was noted.

**Liver**

Exam of the cranial abdomen demonstrated excessive **liver** size and swollen contour. Mild, coarse architecture was noted with increased portal markings and minor parenchymal remodeling is suggestive of an inflammatory component. The gallbladder wall was unremarkable with a minor amount of debris.



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**Gastrointestinal**

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Examination of the **gastrointestinal tract** revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

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**Pancreas**

Diffuse hyperechoic changes were present in the area of the **pancreas**. The pancreatic remodeling was evident with multifocal to diffuse hyperechoic changes. These changes are consistent with fibrosis, amyloid, saponification of fat and may contain areas of low-grade chronic active inflammation especially if pain on imaging (+ Murphy sign) was present +/- focal subxiphoid palpation reveals pain response. No overt masses were noted.

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10 years

**ULTRASONOGRAPHIC FINDINGS**

Structurally unremarkable abdomen with mild pancreatic remodeling.  
Slight, non-obstructive renal mineralization.

**WEIGHT**

21.9 lbs

Benign hepatopathy.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The adrenal glands measure normally. However, if the patient appears Cushingoid and PU/PD is present with urine specific gravity less than 1.020 then work-up for early Cushing's is recommended.

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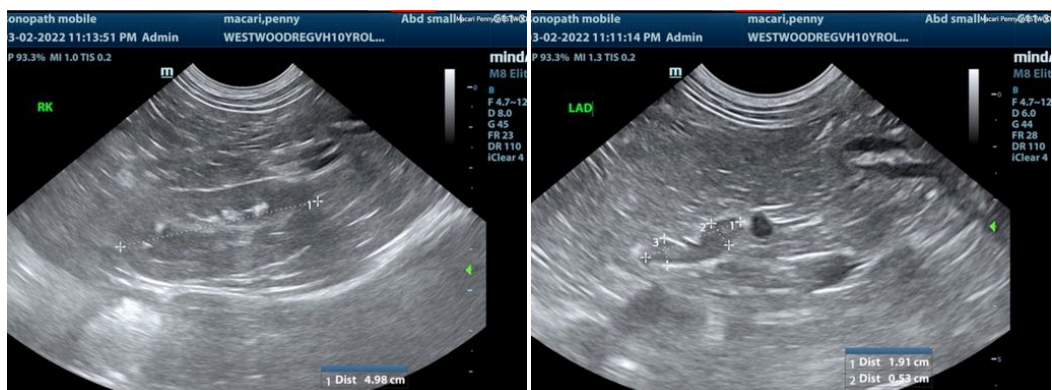
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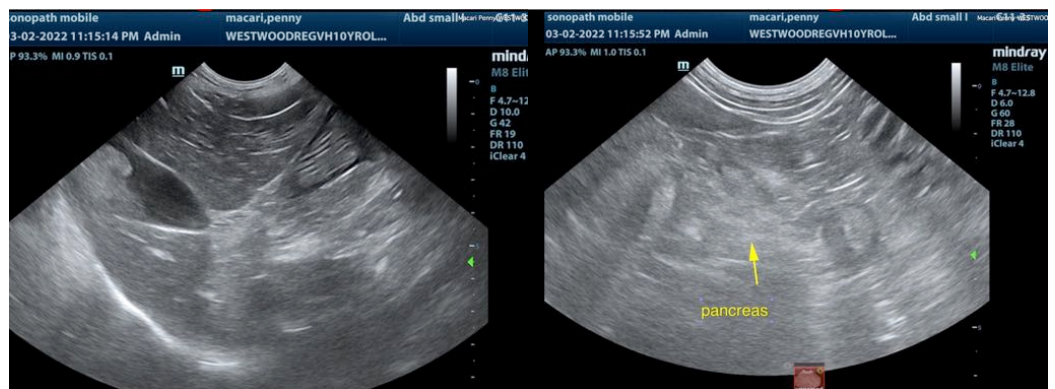
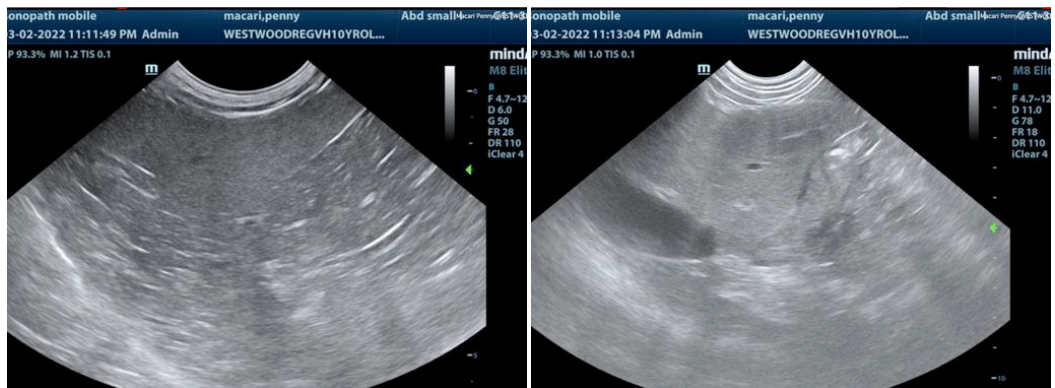
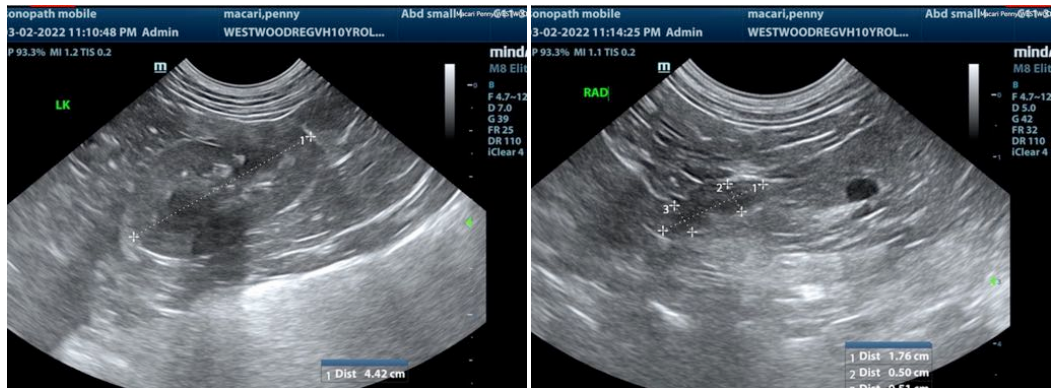
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

Eric Lindquist, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com

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